



1

SEQUENCE LISTING

<110> MAYER, BRUCE
SAKSELA, KALLE
KIRCHAUSEN, TOMAS

<120> FUSION PROTEIN AND USES THEREOF

<130> 701039-050001-C

<140> 10/027,770

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<150> PCT/US00/17929

<151> 2000-06-29

<150> 60/141,896

<151> 1999-06-30

<160> 5

<170> PatentIn Ver. 2.1

<210> 1

<211> 809

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: DNA encoding 3DX,
a second-generation ScFv derived from monoclonal
antibody 9E10

<220>

<221> CDS

<222> (1)..(807)

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gga tct acc atg gcc gag gtg aag ctg gtg gaa tct ggg gga gac tta	48
Gly Ser Thr Met Ala Glu Val Lys Leu Val Glu Ser Gly Gly Asp Leu	
1 5 10 15	

gtg aag cct gga ggg tcc ctg aaa ctc tcc tgt gca gcc tct gga ttc	96
Val Lys Pro Gly Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe	
20 25 30	

act ttc agt cac tat ggc atg tct tgg gtt cgc cag act cca gac aag	144
Thr Phe Ser His Tyr Gly Met Ser Trp Val Arg Gln Thr Pro Asp Lys	
35 40 45	

agg ctc gag tgg gtc gca acc att ggt agt cgt ggt act tac acc cac	192
Arg Leu Glu Trp Val Ala Thr Ile Gly Ser Arg Gly Thr Tyr Thr His	
50 55 60	

tat cca gac agt gtg aag gga cga ttc acc atc tcc aga gac aat gac	240
Tyr Pro Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Asp	
65 70 75 80	

aag aac gcc ctg tac ctg caa atg aac agt ctg cgg act gaa gac aca	288
Lys Asn Ala Leu Tyr Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr	
85 90 95	
gcc atg tat tac tgt gta aga aaa agt gaa ttt tat tac tac ggt aat	336
Ala Met Tyr Tyr Cys Val Arg Lys Ser Glu Phe Tyr Tyr Tyr Gly Asn	
100 105 110	
acc tac tat tac tct gct atg gac tac tgg ggt caa gga gcc tca gtc	384
Thr Tyr Tyr Tyr Ser Ala Met Asp Tyr Trp Gly Gln Gly Ala Ser Val	
115 120 125	
acc gtc tcc tca ggt gga ggc ggt tca ggc gga ggt gac tct ggc ggt	432
Thr Val Ser Ser Gly Gly Gly Ser Gly Gly Gly Asp Ser Gly Gly	
130 135 140	
ggc ggt tcc gac att gtg ctg acc caa tct cca gct tct ttg gct gta	480
Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val	
145 150 155 160	
tct cta gga cag agg gcc acc atc tcc tgc aga gcc agc gaa agt gtt	528
Ser Leu Gly Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val	
165 170 175	
gat aat tat ggc ttt agt ttt atg aac tgg ttc caa cag aaa cca gga	576
Asp Asn Tyr Gly Phe Ser Phe Met Asn Trp Phe Gln Gln Lys Pro Gly	
180 185 190	
cag cca ccc aaa ctc ctc atc tat gct aca tcc aac cga gga tcc ggc	624
Gln Pro Pro Lys Leu Leu Ile Tyr Ala Thr Ser Asn Arg Gly Ser Gly	
195 200 205	
gtc cct gcc agg ttt agt ggc agt ggg tct ggg aca gac ttc agc ctc	672
Val Pro Ala Arg Phe Ser Ser Gly Ser Gly Thr Asp Phe Ser Leu	
210 215 220	
aac atc cat cct gta gag gag gat gac tct gca atg tat ttc tgt cag	720
Asn Ile His Pro Val Glu Glu Asp Asp Ser Ala Met Tyr Phe Cys Gln	
225 230 235 240	
caa act aag gag gtt ccg tgg acg ttc ggt gga ggc acc aag ctg gaa	768
Gln Thr Lys Glu Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu	
245 250 255	
atc aaa cgg gct gat gct gca cca act gta tcc gcg gcc gc	809
Ile Lys Arg Ala Asp Ala Ala Pro Thr Val Ser Ala Ala	
260 265	

<210> 2

<211> 269

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: 3DX, a
second-generation ScFv derived from monoclonal
antibody 9E10

<400> 2

Gly Ser Thr Met Ala Glu Val Lys Leu Val Glu Ser Gly Gly Asp Leu
 1 5 10 15
 Val Lys Pro Gly Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe
 20 25 30
 Thr Phe Ser His Tyr Gly Met Ser Trp Val Arg Gln Thr Pro Asp Lys
 35 40 45
 Arg Leu Glu Trp Val Ala Thr Ile Gly Ser Arg Gly Thr Tyr Thr His
 50 55 60
 Tyr Pro Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Asp
 65 70 75 80
 Lys Asn Ala Leu Tyr Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr
 85 90 95
 Ala Met Tyr Tyr Cys Val Arg Lys Ser Glu Phe Tyr Tyr Tyr Gly Asn
 100 105 110
 Thr Tyr Tyr Tyr Ser Ala Met Asp Tyr Trp Gly Gln Gly Ala Ser Val
 115 120 125
 Thr Val Ser Ser Gly Gly Gly Gly Ser Gly Gly Gly Asp Ser Gly Gly
 130 135 140
 Gly Gly Ser Asp Ile Val Leu Thr Gln Ser Pro Ala Ser Leu Ala Val
 145 150 155 160
 Ser Leu Gly Gln Arg Ala Thr Ile Ser Cys Arg Ala Ser Glu Ser Val
 165 170 175
 Asp Asn Tyr Gly Phe Ser Phe Met Asn Trp Phe Gln Gln Lys Pro Gly
 180 185 190
 Gln Pro Pro Lys Leu Leu Ile Tyr Ala Thr Ser Asn Arg Gly Ser Gly
 195 200 205
 Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Ser Leu
 210 215 220
 Asn Ile His Pro Val Glu Glu Asp Asp Ser Ala Met Tyr Phe Cys Gln
 225 230 235 240
 Gln Thr Lys Glu Val Pro Trp Thr Phe Gly Gly Gly Thr Lys Leu Glu
 245 250 255
 Ile Lys Arg Ala Asp Ala Ala Pro Thr Val Ser Ala Ala
 260 265

<210> 3

<211> 9

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Epitope to the
12CA5 antibody

<400> 3

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
1 5

<210> 4

<211> 7

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Short
motif

<400> 4

Pro Glu Arg Pro Pro Lys Pro
1 5

<210> 5

<211> 269

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: 3DX, a
second-generation ScFv derived from monoclonal
antibody 9E10 with site directed mutagenesis

<400> 5

Gly Ser Thr Met Ala Glu Val Lys Leu Val Glu Ser Gly Gly Asp Leu
1 5 10 15

Val Lys Pro Gly Gly Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe
20 25 30

Thr Phe Ser His Tyr Gly Met Ser Trp Val Arg Gln Thr Pro Asp Lys
35 40 45

Arg Leu Glu Trp Val Ala Thr Ile Gly Ser Arg Gly Thr Tyr Thr His
50 55 60

Tyr Pro Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Asp
65 70 75 80

Lys Asn Ala Leu Tyr Leu Gln Met Asn Ser Leu Lys Ser Glu Asp Thr
85 90 95

Ala Met Tyr Tyr Cys Ala Arg Arg Ser Glu Phe Tyr Tyr Tyr Gly Asn
100 105 110

Thr Tyr Tyr Tyr Ser Ala Met Asp Tyr Trp Gly Gln Gly Ala Ser Val
115 120 125

Thr	Val	Ser	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly	Gly	Gly	Ser	Gly	Gly
130						135					140				
Gly	Gly	Ser	Asp	Ile	Val	Leu	Thr	Gln	Ser	Pro	Ala	Ser	Leu	Ala	Val
145					150					155					160
Ser	Leu	Gly	Gln	Arg	Ala	Thr	Ile	Ser	Cys	Arg	Ala	Ser	Glu	Ser	Val
				165					170					175	
Asp	Asn	Tyr	Gly	Phe	Ser	Phe	Met	Asn	Trp	Phe	Gln	Gln	Lys	Pro	Gly
			180					185					190		
Gln	Pro	Pro	Lys	Leu	Leu	Ile	Tyr	Ala	Ile	Ser	Asn	Arg	Gly	Ser	Gly
		195					200					205			
Val	Pro	Ala	Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Ser	Leu
	210					215					220				
Asn	Ile	His	Pro	Val	Glu	Glu	Asp	Asp	Pro	Ala	Met	Tyr	Phe	Cys	Gln
225					230					235					240
Gln	Thr	Lys	Glu	Val	Pro	Trp	Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu
				245					250					255	
Ile	Lys	Arg	Ala	Asp	Ala	Ala	Pro	Thr	Val	Ser	Ala	Ala			
			260				265								